



Metallic Mineral Exploration, Advanced Exploration and Mining

August 18, 2016

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

Protecting Maine's Air, Land and Water

Slide 1

8/19/2016

Overview

- Mining in Maine
- History of Mining Law
- Maine's 2012 Metallic Mineral Mining law
- Request to post proposed changes to Chapter 200



Why are we here?

- New metallic mine sites are being developed in other states and New Brunswick.
- We have a rule in effect now, but it does not align with the statute in some important ways.
- We could receive an application and issue a mining permit now.

We would prefer to figure out how to implement the 2012 Act through a comprehensive rulemaking process than when faced with a permit application.



MINING IN MAINE:

Overview of Mining & Regulation

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Mining in Maine

State Jurisdiction

- Regulate rock quarries - 1 acre
- Regulate excavations for sand , gravel, topsoil & clay - 5 acres
- Regulate metallic mineral mining
- Standards for clay & topsoil excavations less than 5 acres



Mining In Maine



- 866 registered sites:
 - 731 gravel pits
 - 124 quarries
 - 11 clay/topsoil
- ★ 10,945 acres
NOITC



- Active site law pits -
99 remaining
- ★ 4,923 acres Site
Law



Recent Maine Exploration Projects

Exploration Projects:

- Ledge Ridge, Parmachenee TWP-Aur Resources, 1993-95

Outcrop Stripping & Trenching

- Monument Brook, Amity-Freewest Resources, 1999

Mapping & Chip Sampling

- Big Hill, Pembroke-Golden Hopes Mines, 2008

Aeromagnetic surveys and Drill Holes

Advanced Exploration Projects:

- Alder Pond, West Forks-BHP-Utah, 1992

Decline Ramp for Bulk Sample (Site Law Permit)



Metal Mining: Exploration



Source: Maine Geological Survey



Source: Fred Beck



Metal Mining in Maine

Mines:

Blue Hill

Harborside

Katahdin Iron Works

Notable Deposits:

Alder Pond

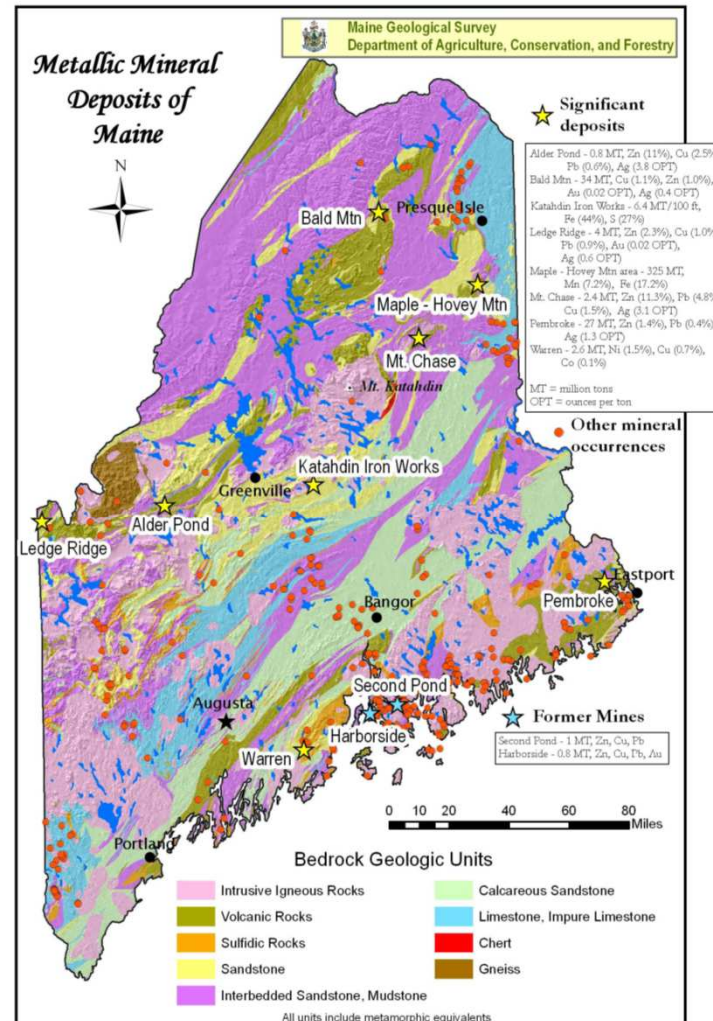
Ledge Ridge

Mt. Chase

Bald Mountain

Big Hill

Warren Nickel



Source: Fred Beck



Metal Mining in Maine

Harborside Mine:

- Mined first in 1881
- Mined by open pit - Callahan Mining Corporation, 1967-1972
- 1968-1972 production: 798,000 tons
 - 4.91% Zinc
 - 1.31% Copper
 - 0.36% Lead
 - 17.1 g/mt Silver
- Type: Volcanogenic (VMS)
- Satellite Deposits: Yes



Source: Fred Beck



Metal Mining in Maine

Blue Hill Mine

- 1878-1883: Underground Mine
2-3 million pounds Cu reportedly mined
- 1918: 125 TPD flotation mill; 6 months production
- 1967: Reserve estimate; 617,000 tons, 19.1% Zn, 0.85% Cu
- 1972-1977: Mined underground by Kerr American; 1.02 million tons; 6.9% Zn, 0.93% Cu.
- Type: Distal volcanogenic; stratabound
- Satellite deposits: Yes



Source: Fred Beck



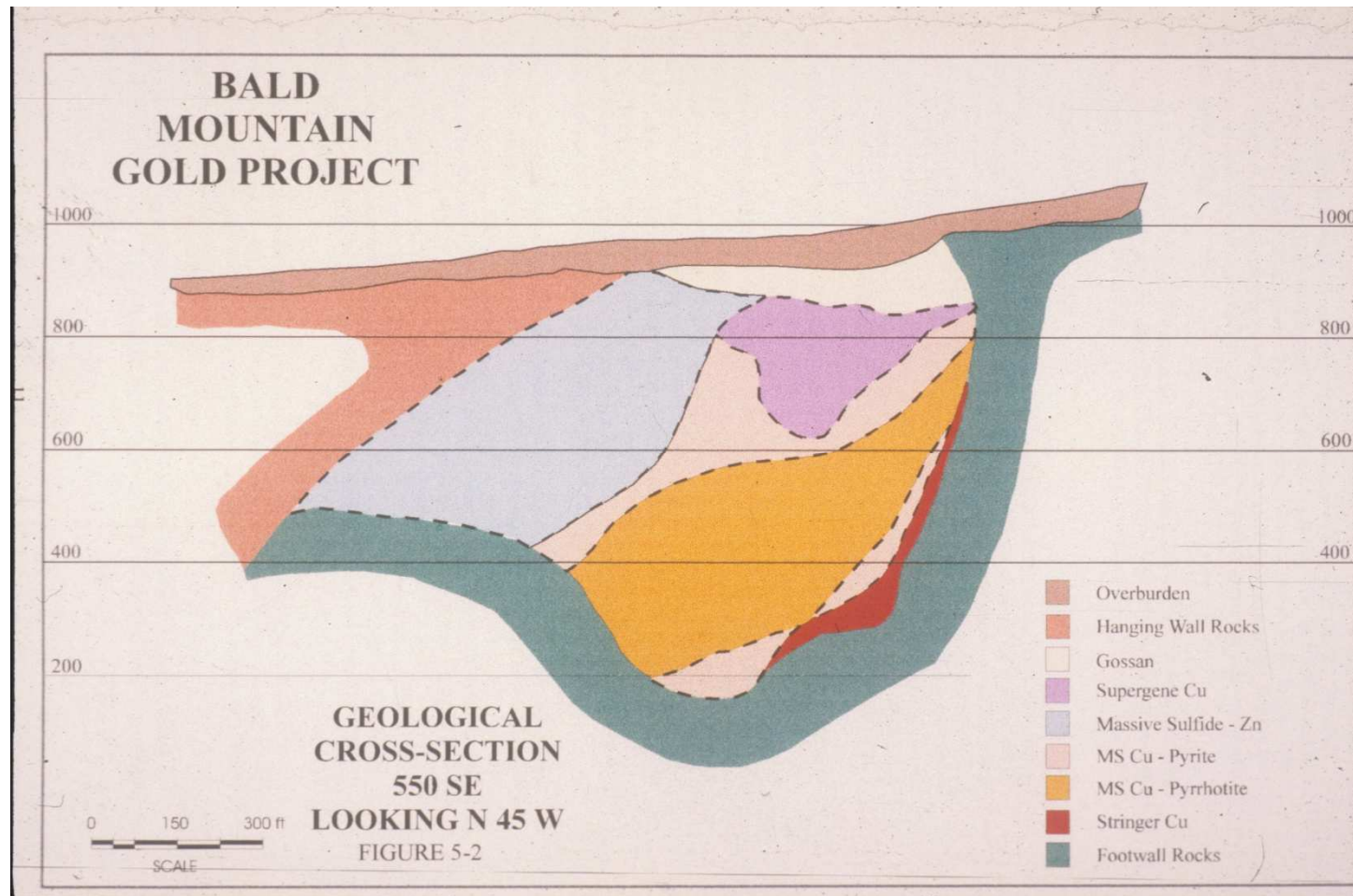
Metal Mining in Maine

Bald Mountain

- Current Owners: Irving Timberlands 87.5%; Prentiss and Carlisle Company 12.5%
- Explored by: Superior Mining, Freeport Exploration, Chevron Resources, Boliden Resources and Black Hawk Mining (Discovered by John Cummings)
- Reserves:
 - Copper zone; 22 million tons
 - Zinc zone; 13 million tons
 - Gossan: 1.2 million tons
- In 1997, Black Hawk submitted an application under Chapter 200 Rules to mine the gossan cap and the high grade copper zone.
 - Open Pit Mine
 - Mine Rock Classification
 - Background arsenic concentrations are high
- In 1999, Black Hawk withdrew its application.



Bald Mountain



Types of Mines: Open Pit



Types of Mines: Underground



Source: Fred Beck



Mining: Drilling



Mining: Explosives



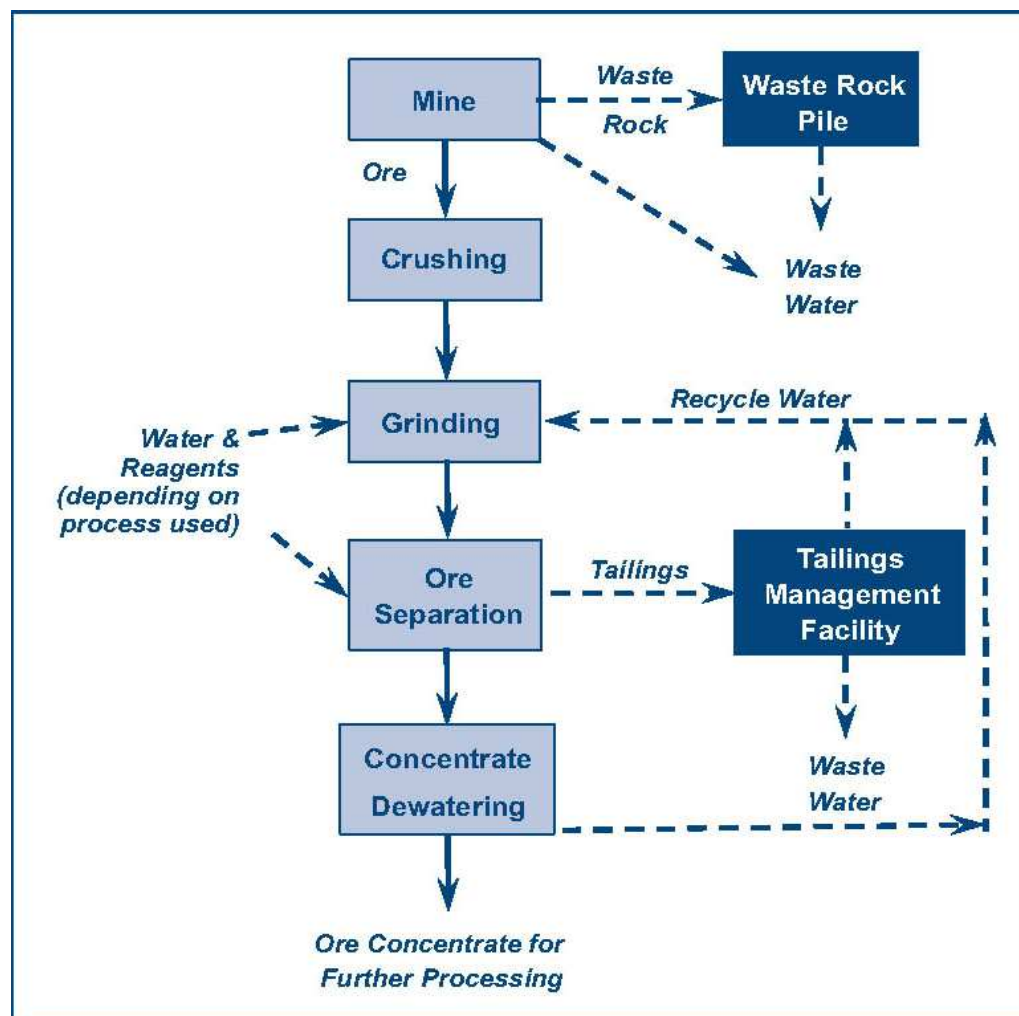
Mining: Blasting



Mining: Mucking



Mining Process Flow Chart



Source::Environment & Climate Change Canada



Metal Mining: Crushing



Metal Mining: Processing Facility



Metal Mining Processing



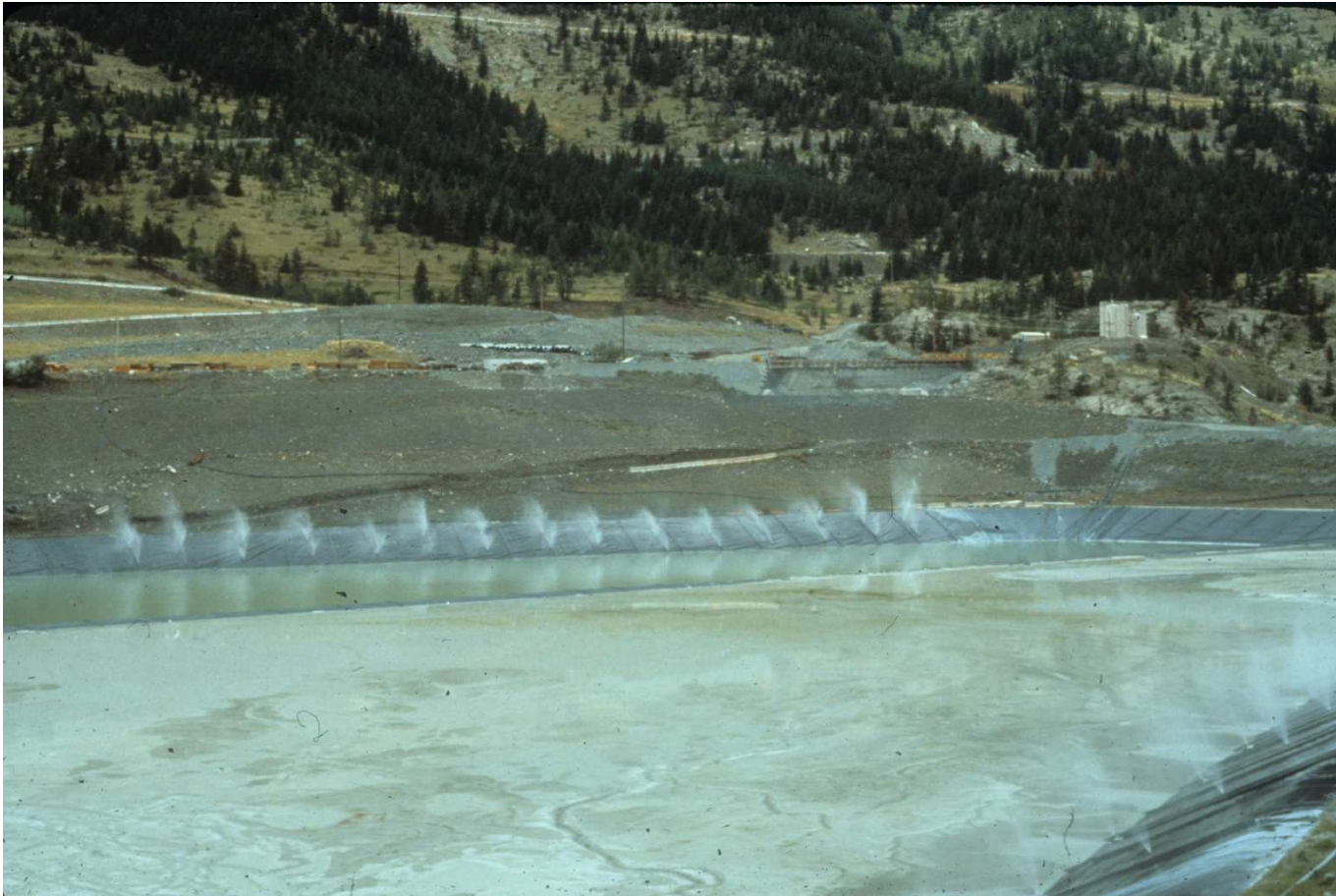
Metal Mining Flotation



Metal Mining: Processing



Wet Tailings



Dry Tailings



Metal Mining: Concentrate



Concern: Acid Rock Drainage



History of Mining Law

Conservation & Rehabilitation Land Act (1969)

- Administered by Maine Mining Commission
- Regulated all mining, except for sand & gravel
- Repealed in 1979 after consolidation with the Site Law



History of Mining Law

- 1990 Legislature enacted a law giving DEP and LURC rulemaking authority to develop a frame work to regulate metal mining.
- 1991 the “*Metallic Mineral Exploration, Advanced Exploration and Mining*” rule was adopted (Chapter 200)
 - Consolidated the permits requirements for Site Law, NRPA, Solid Waste Management Act and Land Use Regulation Law
 - Separate permits are required for Air , Wastewater Discharge, and District Boundary change.
 - To date, no metallic mining permits have been issued.



Maine's 2012 Metallic Mineral Mining Act

Melanie Loyzim
Deputy Commissioner
Maine Department of Environmental Protection



Maine Metallic Mineral Mining Act

In April 2012, the Maine Legislature passed *"An Act To Improve Environmental Oversight and Streamline Permitting for Mining in Maine"* (LD 1853; 2011 Pub Law 653)

Assigned new responsibilities to DEP but did not change other laws and rules overseen by the DEP and other agencies that also pertain to mining- for example, the Dept. of Agriculture, Conservation and Forestry (DACF) has authority in Maine Revised Statutes, Title 12 for forests, parks, lakes, rivers, mining on state lands and some exploration activities



Other Mining Laws

- Gold panning and recreational motorized gold prospecting are permitted in rivers and streams pursuant to 38 M.R.S. §§ 480-Q(5) and 480-Q(5-A).
- DACF continues to regulate mining exploration activities in unorganized and de-organized areas of the state.
- DACF is the agency with authority for determining what activities to allow on public lands, including mining.



Laws, Statutes and Rules

- The term "laws" refers to all laws passed by the Legislature, which are subsequently bound in the Session Laws of that year. Statutes are a codification of the general and permanent laws, which are compiled and published every year as the Maine Statutes or its supplement.
- A rule is a general statement adopted by an agency to make the law it enforces or administers more specific or to govern the agency's organization or procedure. An agency may adopt a rule only after the legislature has enacted a law granting this authority to the agency. A rule cannot repeal or otherwise alter laws or statutes.



2012 Mining Act

- Definitions- § 490-MM
- DEP, LUPC and municipal authority- § 490-NN
- Application requirements- § 490-OO
- Mining permit duration, termination, revocation, transfer and amendment- § 490-PP
- Performance, operation and reclamation standards- § 490-QQ
- Financial assurance- § 490-RR
- Mining and reclamation report- § 490-SS
- Violations- § 490-TT



2012 Mining Act

Key Definitions

- **Contamination**

(1) As applied to groundwater, “contamination” means nonattainment of water quality standards, the cause of which is attributable to a mining operation, as:

(a) Specified in rules relating to primary drinking water standards adopted pursuant to 22 M.R.S. § 2611; or

(b) Demonstrated by a statistically significant change in measured parameters that indicates deterioration of water quality determined through assessment monitoring.

(2) As applied to surface water, “contamination” means a condition created by any direct or indirect discharge that causes or contributes to nonattainment of applicable water quality or licensing standards under 38 M.R.S. § 414-A or 420. The nonattainment may be attributable to the mining operation either by itself or in combination with other discharges.



2012 Mining Act

Key Definitions

- **Mining**- “Mining” includes bulk sampling, advanced exploration, extraction or beneficiation, waste storage, stockpiles, and reclamation. “Mining” does not include exploration.
- **Mining Area**- “Mining Area” includes:
 - Land from which earth material is removed
 - Lands on which material from mining is stored or deposited
 - Lands on which beneficiating or treatment facilities are located



2012 Mining Act

Permit Application Process

Public Participation

- Title 5, Chapter 375 – Maine Administrative Procedures Act
- DEP Chapter 2 – Rule Concerning the Processing of Applications and Other Administrative Matters
- DEP Chapter 3 - Rules Governing the Conduct of License Hearings
- 38 M.R.S. 490-OO (4)
 - Applicant must provide notice to local officials and DACF 60 days before submit application
 - Applicant must publish notice in newspaper
 - DEP must hold adjudicatory hearing in area where mine is proposed
 - Local officials may request intervenor status, receive assistance grant, and have access to proposed site

(P136-137)



2012 Mining Act

Permit Application Requirements

38 M.R.S. § 490-00

- Environmental Impact Assessment to address practicable alternatives to impacts
- Environmental protection, reclamation and closure plan
- Contingency plan
- Financial assurance

(P136-137)



2012 Mining Act

Permit Application Requirements

38 M.R.S. § 490-00

Environmental Impact Assessment (EIA)

- Must define the mining area.
- Must define the affected area.
- Must address practicable alternatives to mitigate impacts to the mining area.
- Must address potential impacts to the affected area.

(P136)



2012 Mining Act

Permit Application Requirements

38 M.R.S. § 490-00

Environmental Protection, Reclamation and Closure Plan

- Description of materials, methods and techniques to be used.
- Information demonstrating that materials, methods and techniques are protective of public health.
- Reclamation plans.
- Description of geochemistry.
- Mining operations closure plan.
- Provisions to prevent, control and monitor acid-forming and other waste products

(P136-137)



2012 Mining Act

Permit Application Requirements

38 M.R.S. § 490-00

Contingency Plan

- Must include an assessment of the risk to the environment and public health and safety associated with significant incidents or failures related to the mining operation.
- Must describe the mining operator's notification and response plans.
- Must be provided to each municipality in which the mining area and affected area may be located, or to the county commissioners in an unorganized area.

(P137)



2012 Mining Act

Financial Assurance

38 M.R.S. § 490-RR

- Applies to all mining and reclamation activities subject to a mining permit
- Must be sufficient to cover the cost:
 - For DEP to administer, and hire a 3rd party to implement, all activities necessary for investigation, monitoring, closure, treatment, remediation, reclamation, operation and maintenance, AND
 - For any other necessary environmental protection measures, including remediation of any contamination of air, surface water or groundwater.

(P145)



2012 Mining Act

Financial Assurance

38 M.R.S. § 490-RR

- Duration of financial assurance
 - Until all reclamation has been completed and during the post-closure monitoring period
 - May be required for as long as mining operation and waste material could create an unreasonable threat to public health or the environment
- Financial assurance mechanism
 - Must be adequate to protect the State's interests
 - Must be in a form that cannot be cancelled, withdrawn, revoked, or otherwise reduced without express written consent of the Commissioner

(P145)



2012 Mining Act

Criteria for Permit Approval

38 M.R.S. § 490-00

Financial capacity and technical ability

Will not unreasonably and adversely affect existing uses, scenic character, air quality, water quality and other resources

Soil types are suitable for mining activities

Discharge of pollutants will not violate water quality standards

Groundwater and surface water withdrawals will comply with standards

Adequate provisions have been made for utilities

Will not unreasonably cause or increase flooding

Adequate provisions have been made for public safety

No heap or percolation leaching

(P137-138)



2012 Mining Act

Criteria for Approval

38 MRS §490-00 (4)(D)

“Discharges to groundwater from activities permitted under this article may occur within a **mining area**, but such discharges may not result in **contamination** of groundwater beyond each mining area.”

(P138)



2012 Mining Act

Key Definitions

- **Contamination**

(1) As applied to **groundwater**, “contamination” means nonattainment of water quality standards, the cause of which is attributable to a mining operation, as:

(a) Specified in rules relating to primary drinking water standards adopted pursuant to 22 M.R.S. § 2611; or

(b) Demonstrated by a statistically significant change in measured parameters that indicates deterioration of water quality determined through assessment monitoring.

- **Mining Area-** “Mining Area” includes:

- Land from which earth material is removed
- Lands on which material from mining is stored or deposited
- Lands on which beneficiating or treatment facilities are located



2012 Mining Act

Permit Duration

38 MRS §490-PP (1)

“A mining permit issued by the department remains in effect until terminated or revoked by the department.”

(P141)



2012 Mining Act

Conflicts with current Chapter 200

- *Site Location of Development Act* and associated rules do not apply (2012 Act)
- *Maine Hazardous Waste, Septage and Solid Waste Management Act* and associated rules do not apply (2012 Act)
- Permit not subject to renewal
- Environmental Impact Report optional (current) versus Environmental Impact Assessment required (2012 Act)
- Financial Assurance for 1 year of costs (current) versus coverage for all potential costs (2012 Act)
- Individual closure plan (current) versus 30-year post-closure water quality monitoring requirements (2012 Act)



Request to Post Proposed Changes to Chapter 200

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Maine Department of Environmental Protection



The Chapter 200 Metallic Mineral Exploration, Advanced Exploration and Mining Proposal

A new mining rule that will repeal and replace the existing Chapter 200 regulations, and provide a comprehensive application and permitting process within the statutory framework for exploration advanced exploration and mining activities. Based on the 2012 Mining Act and the Board's 2014 provisionally-adopted rule, the new proposal incorporates comments from a wide range of stakeholders and the Legislature's ENR Committee during previous rulemaking and legislative activities.



Chapter 200 Overview

Eight Subchapters

- Subchapter 1- General Provisions
- Subchapter 2 - Exploration and Advanced Exploration
- Subchapter 3 - Permits
- Subchapter 4 - Financial Assurance and Insurance
- Subchapter 5 - Mining Standards
- Subchapter 6 - Inspection, Recordkeeping and Reporting Requirements
- Subchapter 7 - Voluntary Suspension and Resumption of Mining Activities
- Subchapter 8 - Violations and Enforcement

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Chapter 200

Subchapter 1: General Provisions

Applicability

- Applies to all exploration, advanced exploration and mining activities.
- No permit shall be issued for mining operations that include
 - Heap, percolation or in-situ leaching
 - Mining for thorium or uranium ore
 - Block caving

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Chapter 200

General Provisions

Definitions

Where words are already defined in the framework law or other environmental protection laws of the state, the definitions in the proposal are consistent with these definitions. Some of the key definitions in Chapter 200 include:

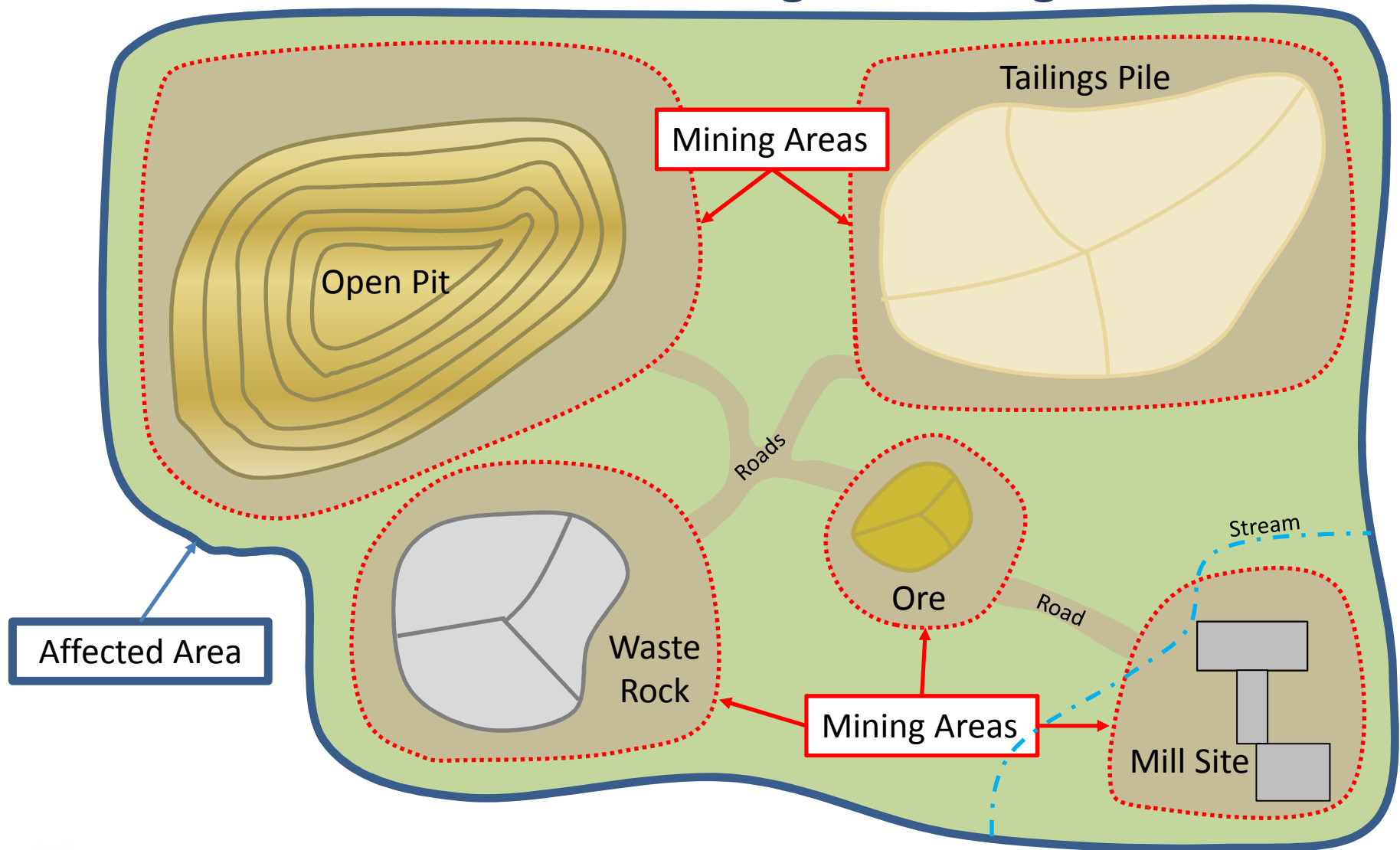
“Mining Area.” Since this definition is in statute, the Department can only clarify its application. The new proposal states:

Mining Area. “Mining area,” or “metallic mineral mining area” means ...are located. Each mining activity or operation shall establish a separate mining area. The Applicant shall propose, and the Department shall approve the location and extent of each mining area.

P160



Metallic Mineral Mining Site - Diagram



Chapter 200

General Provisions

Definitions

- **Active Treatment System.** “Active treatment system” or “active treatment” means a system that treats water or wastewater with the active addition of chemical reagents or the application of external energy. Active treatment does not include periodic inspections and routine maintenance such as the mowing of vegetation.
- **Mine Waste. Mine Waste.** “Mine waste” means all material, including but not limited to, overburden, rock, lean ore, leached ore, or tailings that in the process of mining and beneficiation has been exposed or removed from the earth during advanced exploration and mining activities.

P154/160



Chapter 200

General Provisions

Definitions

- **Passive Treatment System.** “Passive treatment system” means the process of removing metals, acidity or both, through the use of chemical, biological, and physical removal processes that occur naturally in the environment such as topographical gradient, microbial metabolic energy, photosynthesis and chemical energy that do not require power or chemicals after construction and operates successfully over its design life with regular but infrequent maintenance.
- **Perpetual Treatment.** “Perpetual treatment” means active treatment for more than 10 years post-closure.
- **Wet Mine Waste Unit.** “Wet mine waste unit” means a mine waste unit that uses water as a cover to minimize oxygen advection and diffusion to Group A waste in a manner that effectively inhibits formation of acid rock drainage. *Wet mine waste units shall not be used for storage or treatment of mine waste after closure.*

P160,161, 163



Chapter 200

General Provisions

Prohibitions

- It is unlawful to engage in any exploration or mining activity except as authorized by Chapter 200
- The Department may not approve a mining permit in an unorganized territory unless the Land Use Planning Commission certifies that is an allowed use and it meets any relevant land use standards .
- The Department will not authorize a discharge of pollutants to the waters of the State under the Mining Rule.
- No chemicals or oil waste products may be discharged, mixed or released into the ground or waters of the State
- Only Group C waste rock may be used for roads and construction.

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Chapter 200

General Provisions

Relation to Other Rules

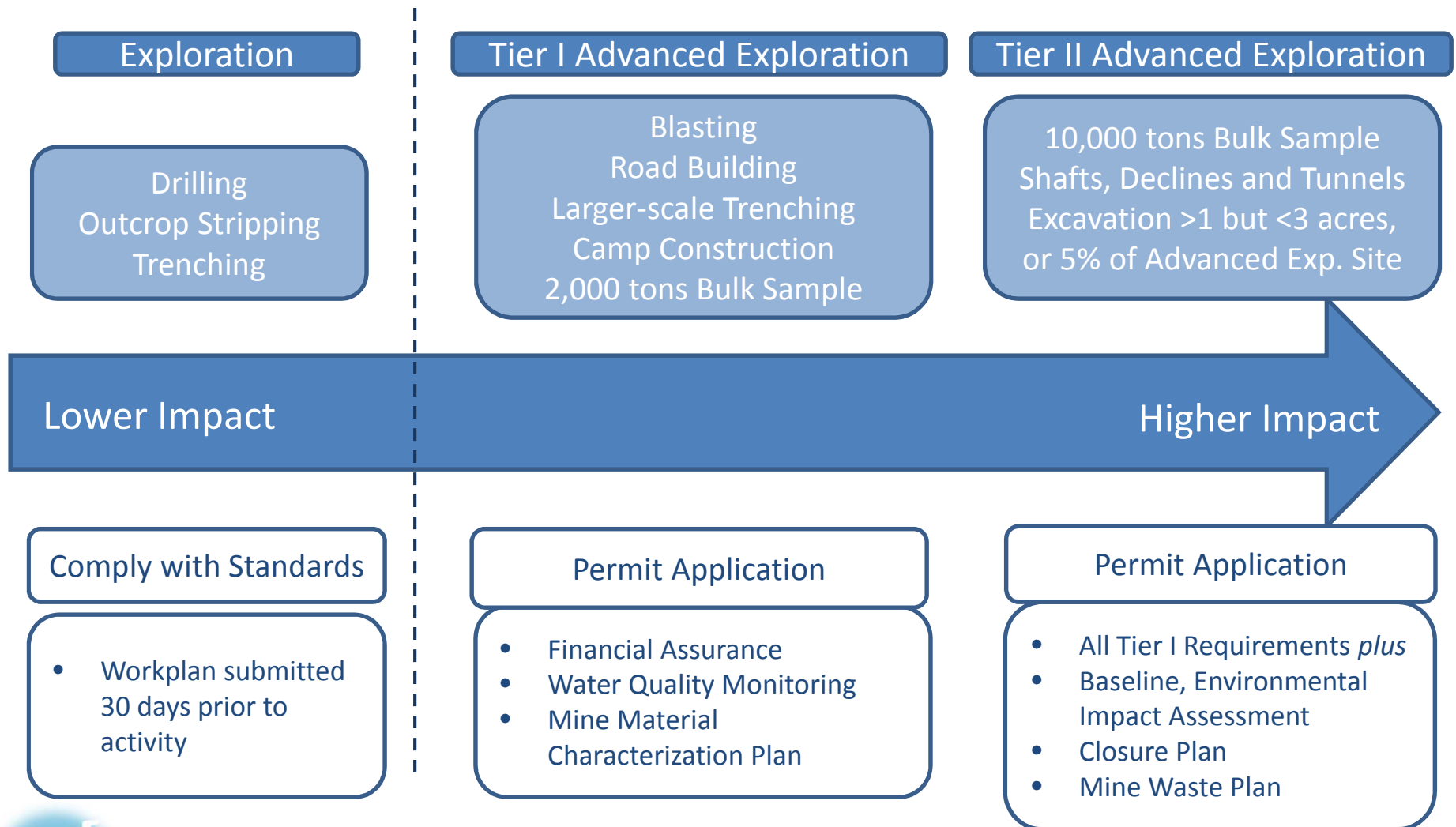
- A Permittee must comply with all other applicable local, state or federal ordinances, regulations and statutes (e.g., the Natural Resources Protection Act, air emissions and water discharge licensing requirements)
- Municipalities may regulate or control mining or reclamation activities
- Municipalities may regulate the transportation of ore, rock, tailings and other mining-related materials on public streets and roads in order to protect the public health, safety and welfare

P164



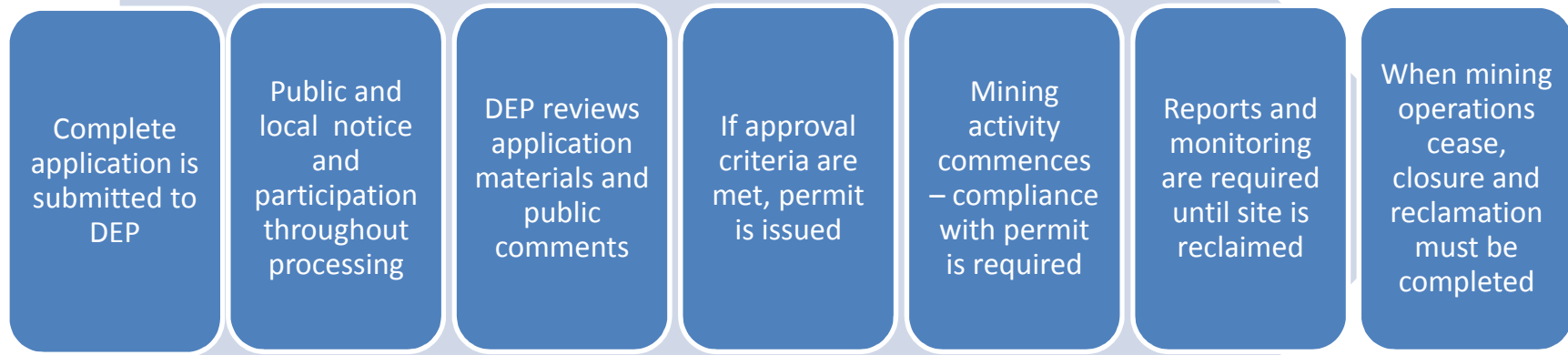
Chapter 200

Subchapter 2: Exploration and Advanced Exploration



Chapter 200

Regulation of Mining Activity – from permit application to reclamation



Chapter 200

Subchapter 3: Permits

Application Requirements

- Application includes:
 - Baseline Site Characterization Report
 - Environmental Impact Assessment
 - Mining Plan
 - Environmental Protection, Reclamation & Closure Plan
 - Alternatives Analysis
 - Monitoring Plan
- Public and local participation opportunities
- Criteria for permit approval
- Mining permit duration, termination, revocation, transfer and amendment requirements

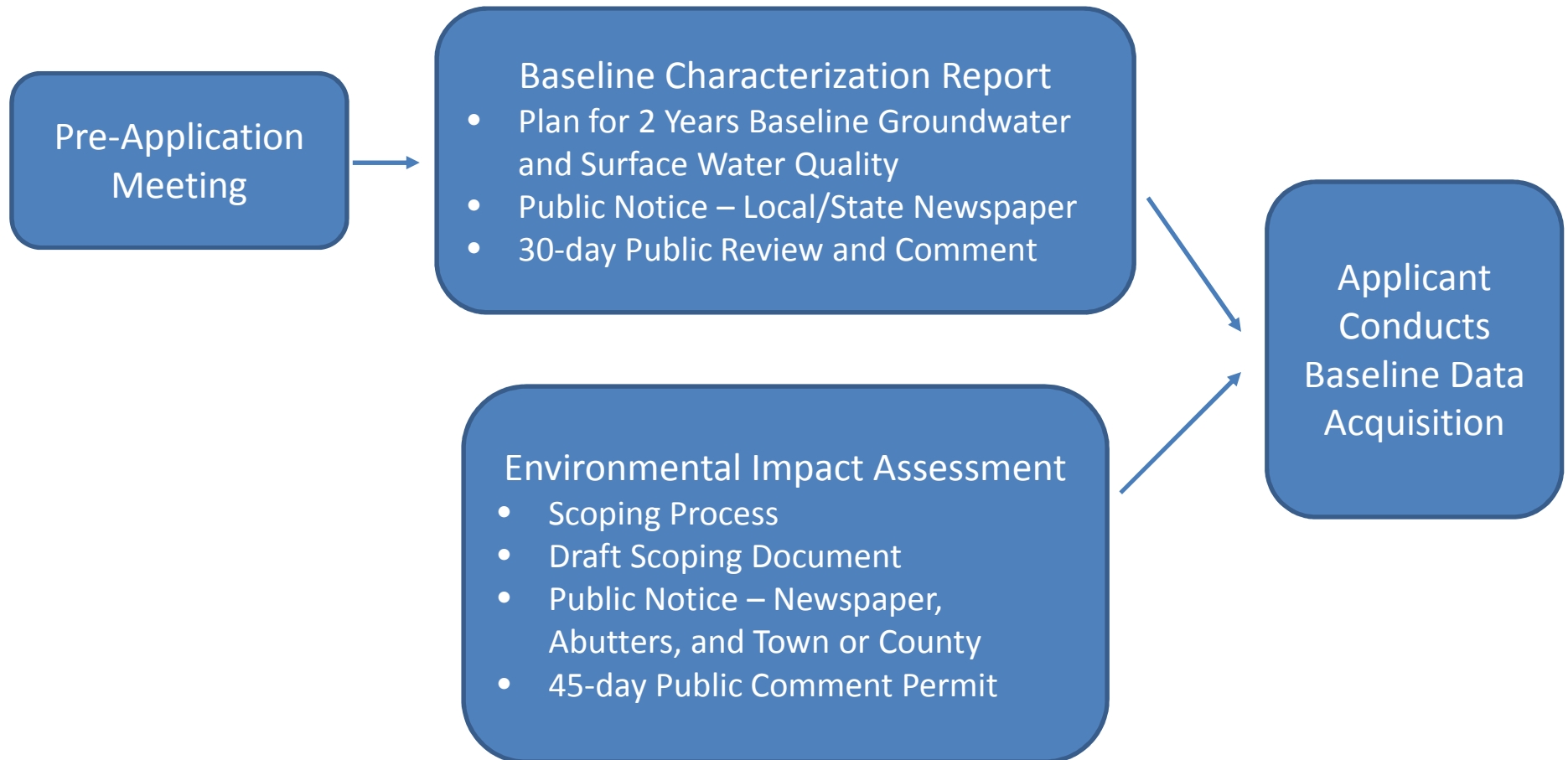
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Chapter 200

Pre-Application Phase

“Front-Load” Process



Chapter 200

Application Requirements

Public and Local Participation

Public and local participation opportunities

- Specific requirements in statute 38 MRS §490-00(6)
 - Mandatory Adjudicatory Hearings
 - Advanced Notice for Intervenor Status/Grant Assistance
- Public notification and participation requirements in draft Chapter 200
 - Baseline Work Plan
 - Draft Scoping Document for EIA
 - Advance notice of intent to file
 - Notice of intent to file
 - Mandatory adjudicatory hearing
- Public participation also governed by statute at 5 MRS Chapter 375: *Maine Administrative Procedure Act* & in the Department's Chapter 2: *Rule Concerning the Processing of Applications & Other Administrative Matters* and Chapter 3: *Rules Governing the Conduct of License Hearings*

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Chapter 200

Application Requirements

Public and Local Participation

- Intervenor Opportunities
 - General intervenors- A request for general intervenor status may be filed on any advanced exploration or mining application. These petitions are governed by the MAPA and the Department's Chapter 3 rules.
 - Municipal and county intervenors- The Mining Act establishes this additional category of intervenor. These intervenors are also eligible for reimbursement grants not to exceed \$50,000 per project.
 - Both general and municipal and county intervenors have access to proposed mining sites.
- Public Information website- The application, review comments and supplemental application materials will be made available on the Department's website.

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Chapter 200

Criteria for Approval

Financial capacity and technical ability

Will not unreasonably and adversely affect existing uses, scenic character, air quality, water quality and other resources

Soil types are suitable for mining activities

Discharge of pollutants will not violate water quality standards

Groundwater and surface water withdrawals will comply with standards

Adequate provisions have been made for utilities

Will not unreasonably cause or increase flooding

Adequate provisions have been made for public safety

No heap or percolation leaching



Chapter 200

Subchapter 4

Financial Assurance and Insurance

Financial assurance is required so that the public will not bear the cost of any reclamation, closure, post-closure maintenance and monitoring or corrective actions associated with the proposed mine. All financial insurance must be fully funded prior to the issuance of a mining permit and is subject to public review through the application process.

- Required for all advanced exploration and mining activities
- Failure to maintain financial assurance constitutes grounds for the immediate suspension of all mining activities including the removal of metallic product from the site
- Financial assurance must be available and payable to the Department when needed, and must be fully valid, binding, and enforceable under state and federal law, and structured to prevent its discharge through bankruptcy

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Chapter 200

Financial Assurance and Insurance Coverage

- Financial assurance must be
 - Sufficient to administer all activities necessary for investigation, reclamation, closure, post-closure maintenance and monitoring, or corrective actions
 - Adequate for the Department to hire a third party to implement these activities
- Requirements may be modified only upward in response to permit changes, changed financial or site conditions, technology changes, inflation, changes in anticipated mining activities and others.
- Includes 20% contingency to account for unexpected expenses.

P200



Chapter 200

Financial Assurance and Insurance

Financial Assurance Mechanisms

- All financial assurance must be held in an independent trust fund that is payable only to the Department. For mining operations that may produce acid leachate, hazardous wastes or release soluble pollutants concentrations exceeding groundwater or surface water standards only cash, negotiable bonds, certificates of deposit or an irrevocable letter of credit may be used to fund the trust.
- Mining operations that will produce only wastes that will not violate water quality standards (other than turbidity) may fund the trust with additional forms of financial assurance including surety bonds.

P203



Chapter 200

Financial Assurance and Insurance

Release of Financial Assurance

The Department will only release the financial assurance if an applicant demonstrates that any and all remaining problems are identified and corrected. Requirements include:

- Public notice requirements
- Release inspection by Department, other state and federal agencies (including IF&W and DACF) and any persons who have requested advance notice of the inspection.
- Public hearing- Any person may request a public hearing on the proposal to release all or part of the financial assurance

P206



Chapter 200

Financial Assurance and Insurance

Forfeiture of Financial Assurance

If a Permittee refuses or is unable to conduct or complete reclamation, closure, post-closure maintenance and monitoring, and corrective actions, if the terms and conditions of the permit are not met, or if the Permittee defaults on the conditions under which the financial assurance was accepted the financial assurance will be forfeited to the Department.

P207



Chapter 200

Subchapter 5: Mining Standards Performance Standards

General requirement for all mine operations and waste units. All units must be designed, constructed, operated and maintained to:

- Meet the performance requirements for groundwater. Surface water, air, soils, and surficial materials established by Chapter 200.
- Minimize acid generation, prevents metal leaching, ARD within the Mining Area.
- Provide structural stability.
- Protect public health and the environment, including all applicable air and water standards
- Eliminate the need for perpetual treatment following closure.

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Chapter 200

Subchapter 5: Mining Standards

Siting

Siting Restrictions include:

- The removal of ore in, on or under great ponds, rivers, brooks and streams, and coastal wetlands as defined in 38 M.R.S. § 480-B is prohibited, except that gold panning and recreational motorized gold prospecting are permitted pursuant to 38 M.R.S. §§ 480-Q(5) and 480-Q(5-A)
- No surface mining within 1 mile, and no underground mining within ¼ mile of the jurisdictional limits of the following unless the applicant can demonstrate that there are sufficient topographical features to protect the resource, the environment and public health and safety:
 - National and state parks
 - National wilderness areas
 - National wildlife refuges
 - The Allagash Wilderness Waterway
 - State-owned wildlife management areas
 - State or national historic sites
 - Rivers designated as critical habitat for Atlantic salmon
 - One of 66 ponds identified as having outstanding or significant scenic values in the “Maine’s Finest Lakes”
 - One of 280 great ponds designated as outstanding or scenic in the “Maine Wildlands Lakes Assessment”
- These setbacks only apply unless and until another state or federal agency with management authority determines that mining is allowed in, on or under the resource.

P211



Chapter 200

Subchapter 5: Mining Standards

Reactive Mine Material Characterization and Classification

- Mine waste is tested to determine metal leaching & ARD
- Classification system is based on risk: Group A, B or C
- Design requirements & financial assurance is based on classification system.
- Use of active treatment limited to no more than 10 years.

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Chapter 200

Subchapter 5: Mining Standards Mine Waste Management Systems

- Reactive mine waste and designated chemical materials management systems must provide for containment, unless the material has been neutralized or stabilized and will not cause a direct or indirect discharge of pollutants that could reasonably result in a condition of nonattainment of water quality standards or noncompliance with the performance standards of this Chapter.
- Reactive mine waste and designated chemical materials management systems must be designed and operated to prevent the contamination of groundwater and surface water or generate acid rock drainage above the primary drinking water standards adopted pursuant to 22 M.R.S. § 2611, applicable water quality-based license conditions established pursuant to 38 M.R.S. § 413 and §§ 464, 465-C, and 470 or groundwater quality baseline conditions.

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Chapter 200

Mining Standards

Waste Unit Design Standards

- Waste Unit Designs
 - Group A waste-composite liner & leachate collection & removal
 - Alternative Design Process (statutory requirement)
- Monitoring & Reporting Requirements
- Reclamation Requirements (Contemporaneous)
- Closure & Post Closure Standards
 - 30 years for Group A & B waste

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Chapter 200

Mining Standards

Monitoring and Reporting

- Proposal includes comprehensive monitoring and reporting requirements for groundwater, surface water, air quality and biological resources.
- Monitoring within the mining area
 - Existing surface-water quality standards apply
 - No standards for discharges to groundwater
 - Groundwater quality must be such that it does not cause or contribute to nonattainment of or noncompliance with the surface-water quality standards in article 4-A or section 414-A or 420

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Chapter 200

Mining Standards

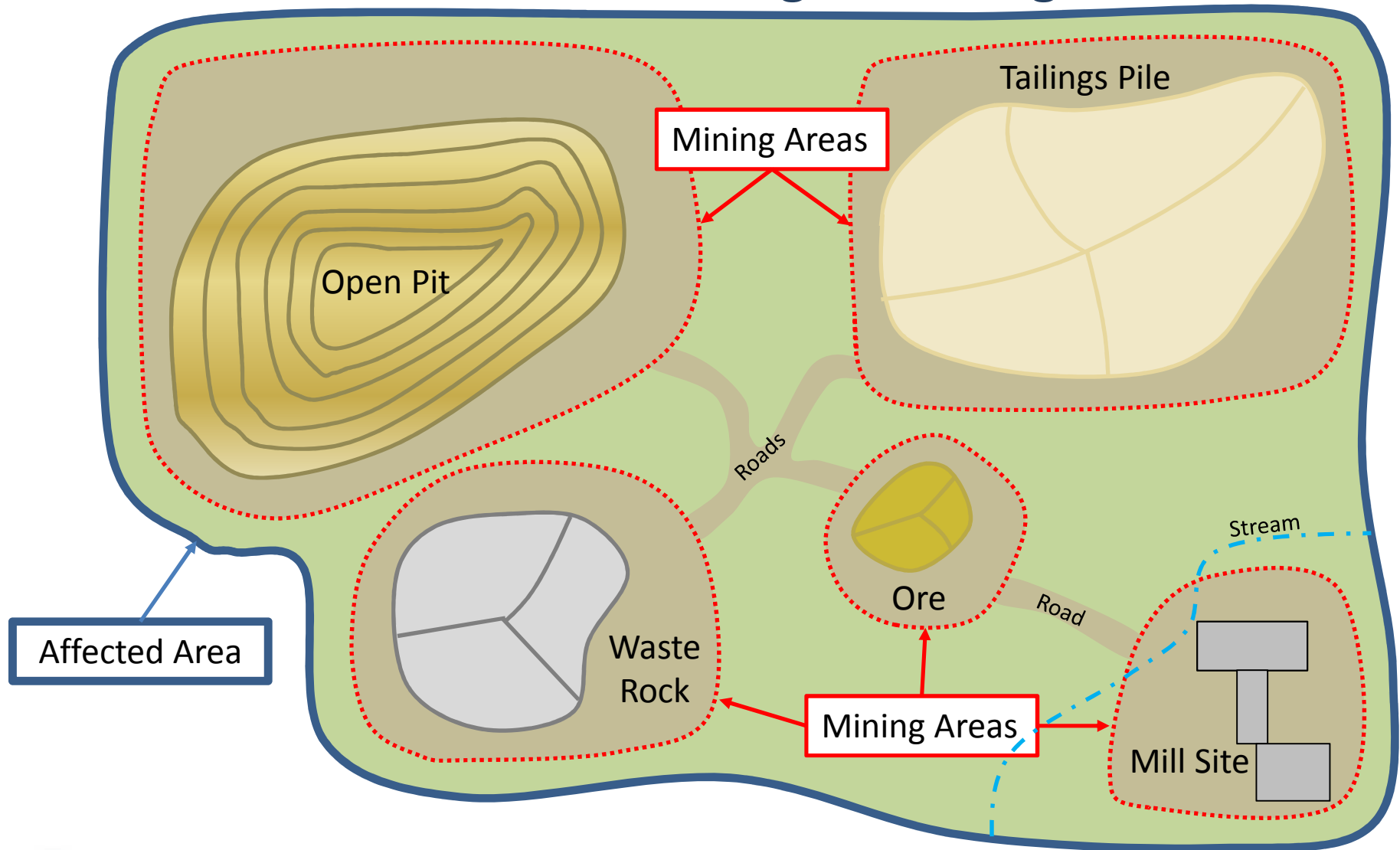
Monitoring and Reporting

- Groundwater monitoring wells must be placed as close as practicable to all mining operations, but in no case greater than 100 feet away, unless placing additional wells at a greater distance enhances the ability to detect a release as determined by the Department.
- Points of compliance for groundwater standards are the downgradient boundaries of all mining operations as they exist at the time any sample is collected
- The Department may require groundwater monitoring within any mining area it determines to be necessary to assess the performance of pollution control measures or the potential for contamination
- The Department may require groundwater monitoring at any location to determine the potential for groundwater discharges to surface waters that would cause or contribute to nonattainment of applicable water quality criteria

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Metallic Mineral Mining Site - Diagram



Chapter 200

Mining Standards

Monitoring and Reporting

- Groundwater monitoring for all parameters, except specific conductance and pH, must take place at least quarterly and monitoring results must be submitted within 10 days
- The Department may require continuous groundwater monitoring of certain parameters, including pH and specific conductance, in groundwater seepage to engineered facilities
- Continuous monitoring results exceeding any established parameter must be submitted electronically within 24 hours.

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Chapter 200

Mining Standards

Monitoring and Reporting

- Surface water and sediment monitoring is required for all parameters on a monthly basis, except that continuous monitoring is required for certain parameters including, but not limited to: water depth, specific conductance, pH, temperature and dissolved oxygen.
- Monthly monitoring results must be submitted within 10 days of the end of each month, and continuous monitoring results exceed any established parameter must be submitted electronically with 24 hours.

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Chapter 200

Subchapter 6

Mining Inspection, Recordkeeping and Reporting Requirements

- All phases of the mining operation must be inspected by qualified professionals in accordance with the quality assurance plan to ensure compliance.
 - Mining areas and affected areas must be inspected at least quarterly
 - During the post-closure monitoring period, mining areas must be inspected at least twice per year
 - Monitoring reports must be submitted to the Department along with plans for any necessary corrective measures

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Chapter 200

Subchapter 6

Mining Inspection, Recordkeeping and Reporting Requirements

- An updated mining and reclamation report must be filed annually and include:
 - An updated contingency plan
 - A description of completed reclamation activities
 - Groundwater, surface water and biological monitoring results
 - A description of any proposed amendments to the amount and type of financial assurance
 - A list of incidents and act of nature and violations during the previous year
 - An evaluation of the mine's operations to verify compliance with approved plans, licenses, and regulatory requirements

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Chapter 200

Subchapter 7

Suspension of Mining

- A Permittee may file a written request to temporarily suspend mining operations for up to 365 days
- During this period, the Permittee must take measures to comply with the mine plan, mining permit, environmental protection, reclamation and closure plan, and to protect the environment, natural resources, and public health and safety
- DEP may require partial closure, adjustment to financial assurance, corrective actions, or other additional measures

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Chapter 200

Subchapter 8

Violations

- Permittee may be ordered to correct any violation within 10 days
- The Department may also pursue enforcement action in accordance with 38 MRS Sections 347-A, 348 and 349
- If violation is causing or resulting in an imminent or substantial endangerment to environment, natural resources or public health and safety, the Department may take additional actions
- Revocation of a permit or suspension does not relieve the Permittee of their obligation to take measures to protect the environment, natural resources and public health and safety

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